

From the:  
INTERNATIONAL SEARCHING AUTHORITY

To:

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**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year)

**08 SEP 2004**

Applicant's or agent's file reference  
FP19906

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/AU2004/000939**

International filing date (day/month/year)

**12 July 2004**

Priority date (day/month/year)

**18 July 2003**

International Patent Classification (IPC) or both national classification and IPC

Int. Cl.<sup>7</sup> C22B 3/00, 3/04, 3/12, 3/44, 19/00, 3/14

Applicant

**ZINIFEX LIMITED et al**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the IPEA/AU

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/AU2004/000939**

**Box No. I      Basis of the opinion**

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in the international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/AU2004/000939**

**Box No. V**      **Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims 1 - 3, 14-19, 24-46	YES
	Claims	NO
Inventive step (IS)	Claims 1 - 3, 14-19, 24-46	YES
	Claims	NO
Industrial applicability (IA)	Claims 1 - 46	YES
	Claims	NO

**2. Citations and explanations:**

The most relevant documents pertaining to novelty and inventive step appear to be:

D1=US 4071357 AND D2=US 5028410

NOVELTY AND INVENTIVE STEP: Claims 1-3, 14-19, 24-46

D1 discloses a method for recovering zinc oxide from steel making flue dust or a similar material by leaching it with concentrated ammonia and carbon dioxide. The process further comprises solid liquid separation after the leach step. Next the liquid portion from the solid liquid separation is subject to a cementation step where lead, copper and cadmium are cemented from the solution. The resulting solution is stripped of ammonia and carbon dioxide by introducing steam into the solution. The ammonia and carbon dioxide from this step is recycled. During the step of removing ammonia and carbon dioxide, zinc salts in solution are precipitated as basic zinc carbonate which is calcined to obtain zinc oxide. Claims 1-3, 14-19 fall within the scope of this disclosure.

Claims 24 to 46 disclose a plant for upgrading an ore or a concentrate. The plant disclosed is a combination of a standard leaching stage and solid liquid separation stages well known in the art, exemplified by disclosures in D1 and D2. The invention disclosed in claims 24 to 46 appears to be a case of the use of known apparatus for a new process. Since it is the apparatus that is claimed, novelty and inventive step cannot be conferred to claims 24 to 46.